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**SUMMARY OF BRISTOL BAY SOCKEYE SALMON CATCHES
BY GEAR TYPE, 1965-1997**

**REPORT TO THE ALASKA
BOARD OF FISHERIES**



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INTRODUCTION

The purpose of this report is to provide the Board of Fisheries with background information regarding the fishing effort and sockeye salmon catches by gear type. The data in this report was obtained from a previous report to the Board of Fisheries in 1995 (Russell, 1995), from the Commercial fisheries Entry Commission, and from the commercial fisheries fish ticket database. The information in this report is considered final for all years through 1996, but some of the data for 1997 is still pending.

Per regulation (5AAC 06.330), drift and set gillnets are the only two types of legal fishing gear in the Bristol Bay commercial salmon fishery. Drift gillnet fishers are limited to 150 fathoms of gear while set gillnet fishers are limited to 50 fathoms. Set gillnets fished in the Naknek-Kvichak, Egegik, Ugashik, and Togiak districts must be at least 300 feet apart, while in the Nushagak District set nets must be at least 450 feet apart. There is no minimum distance required between drift gillnets, but drift gillnets must be at least 300 feet from the side of a setnet or at least 100 feet from the offshore end of a setnet out to the allowable offshore distance for setnets (see 5AAC 06.335 and 5AAC 06.331 (m) and (n)).

Figure 1 illustrates the five fishing districts of Bristol Bay. The drift fleets' mobility enables them to fish more than one district and many drift fishers will land fish in more than one district in a given season. Most setnetters usually only fish in one district in a season. Setnet fishers are much

less mobile and are limited by availability of fishing sites, existing tideland leases, and the base of operation that is necessary to conduct set net fishing activities; mainly fish delivery logistics. However, both gear groups have evolved to take full advantage of available fishing opportunity. Both gear groups are currently effective in harvesting substantial numbers of salmon in relatively short time periods and they compete intensely for these fish.

For the purposes of this report, the total annual effort in a district is defined as the total number of permits that made at least one sockeye delivery in that district for the season. The average sockeye catches were calculated using total effort for each district.

The Bristol Bay commercial salmon fishery became a "Limited Entry" fishery in 1975, and due to court adjudication, the numbers of permits has fluctuated since then (Appendix Table 1). According to the Commercial Fisheries Entry Commission the number of Bristol Bay commercial salmon fishing permits legal to fish during the 1997 season totaled 2,916 permits, or 1,898 drift gillnet and 1,018 set gillnet permits (Appendix Table 1).

Effort

Fishing efforts by district from 1975 to 1996 are listed in Table 1, and are illustrated in Figures 2 to 6. Effort has been the greatest in the districts with the largest sockeye harvest predictions. The Naknek/Kvichak and Egegik Districts have had the largest sockeye harvest predictions in recent

times. The largest annual drift gillnet effort recorded for a single district was 1,389 permit holders in the Naknek/Kvichak District during 1990. The Naknek/Kvichak District drift gillnet effort has exceeded 1,000 permit holders in 12 of the 22 years between 1975 and 1996. The Egegik District has exceeded 1,000 drift fishers three times during that interval and the other three districts have yet to reach that level of effort. The largest set gillnet effort has also occurred in the Naknek/Kvichak District with a peak level of 438 permit holders in 1990. The largest recent increases in drift gillnet effort have occurred in the Egegik and Ugashik Districts. The Nushagak District shows the largest decrease in drift effort, which has been below 20-year average in seven of the last ten years. Drift effort in the Naknek-Kvichak District has fluctuated depending on run forecasts. Set gillnet effort has remained relatively stable in most districts with the exception of Togiak and Ugashik Districts where effort has increased by approximately 80% and 53%, respectively, in the last ten years.

Sockeye Harvest

The 1965 to 1996 Bay-wide percentages of sockeye catch by gear type are listed in Table 2. Over the last 20 years, the drift gillnet harvest averaged 87% of the total Bristol Bay harvest, and set gillnetters averaged 13%. Generally, setnet catches tend to decrease as the need to harvest more fish increases.

Individual district gear performances are listed in Tables 3 through 7 and are illustrated in Figures 7 through 11. Set gillnetters have increased their percentage of the harvest in the Nushagak and

Togiak Districts in the last ten years (Tables 6 and 7) while decreasing their percentages in the Egegik and Ugashik Districts (Tables 4 and 5). Setnet catches have stayed about the same in the Naknek/Kvichak District. The proportion of harvest taken by drift gillnets in the Egegik District has increased from 84% (1978-87) to 91% (1988-97). In the Naknek/Kvichak and Ugashik Districts the percentages of driftnet catches have not changed in the last 10 years. Over the same span of years, the proportion of harvest taken by Nushagak and Togiak drift gillnetters dropped from 81% to 70% and from 78% to 54% respectively. Conversely, set gillnet percentages have increased in the Nushagak, and Togiak Districts while decreasing in the Egegik District.

Setnet catches by section for the Nushagak District (1977 to 1996) and the Naknek/Kvichak District (1985 to 1996) are listed in Tables 10 and 11 and are portrayed in Figures 12 and 13. Igushik section setnet catches have averaged 5% of the district's sockeye harvest, and the Nushagak section setnet catches have averaged 18% of the district's harvest. Both Igushik and Nushagak section setnet catches have increased in the last ten years: Igushik by 4% and Nushagak by 7%. Naknek section setnet catches have averaged 7% of the district's harvest and Kvichak section catches have average 6%.

Comparisons of the average catches per gear type in numbers of sockeye per permit are listed in Table 8 with 10 and 20-year averages calculated. The data indicates that the average sockeye catch per permit has increased by approximately 37% for both drift and set gillnet fishers in the last 10 years. Bay-wide, individual drift gillnet fishers averaged 10,134 sockeye delivered per season from

1977 to 1986, and this increased to 13,851 sockeye per season from 1987 to 1996. Individual set gillnet fishers averaged 2,982 sockeye per season from 1977 to 1986, which increased to 4,074 per setnetter per season from 1987 to 1996.

Average sockeye catches per permit holder by gear type, and by district, from 1977 to 1996, are listed in Table 9 and illustrated in Figures 14 and 15. These data indicate the Naknek/Kvichak District drift gillnet fishers have achieved the largest 20-year average sockeye harvest per permit holder of any district's fishers with 8,980 fish per permittee. The largest, single season, individual drift delivery average of 18,585 sockeye per permit holder was also recorded in the Naknek/Kvichak District and occurred in 1983. Egegik District setnet fishers have the highest 20-year average catch among Bristol Bay setnetters with 3,945 sockeye per permit holder. Ugashik District fishers posted the largest single season individual setnet average on record with 7,030 sockeye per fisher, set in 1981. Togiak District fishers have had the lowest average annual catches for both gear groups with drift gillnetters averaging 1,751 sockeye salmon per permit holder, and set gillnetters averaging 1,733 fish.

LITERATURE CITED

Russell, Richard. 1994. Summary of Bristol Bay Sockeye Salmon Catches by Gear Type, 1965-1994. Alaska Department of Fish and Game, Division of Commercial Fisheries, Bristol Bay RIR Report No. 2A94-43.

Table 1. Drift and set gillnet effort by year and district, 1975-97.

Units of Effort (one or more deliveries during season)												
Year	Naknek-Kvichak		Egegik		Ugashik		Nushagak		Togiak		Bristol Bay ¹	
	Drift	Set	Drift	Set	Drift	Set	Drift	Set	Drift	Set	Drift	Set
1975	705	147	235	88	34	8	421	141	92	24	1,235	445
76	664	182	256	96	75	18	422	178	86	31	1,353	501
77	621	179	324	94	47	7	476	166	130	31	1,355	495
78	798	280	386	130	48	4	641	216	151	38	1,569	650
79	1,060	298	332	159	103	23	656	236	162	57	1,711	768
1980	1,011	347	283	179	187	29	666	241	181	47	1,762	804
81	993	348	345	167	270	33	658	260	178	54	1,783	841
82	801	332	420	168	253	49	980	252	202	56	1,791	859
83	1,064	361	483	171	346	47	792	260	251	58	1,797	861
84	1,091	338	573	180	313	53	575	260	225	63	1,798	866
1985	1,165	351	936	181	740	59	406	251	117	54	1,813	872
86	722	298	833	279	844	136	750	340	141	110	1,800	872
87	1,062	318	929	206	633	78	626	284	146	67	1,799	872
88	1,015	354	1,010	193	578	70	534	282	321	123	1,839	922
89	1,213	363	986	213	555	68	375	288	149	97	1,860	973
1990	1,389	438	970	216	425	65	478	350	128	65	1,880	1,016
91	1,091	362	672	215	451	64	467	312	207	106	1,881	1,025
92	979	350	951	205	518	67	527	300	278	116	1,884	1,025
93	835	335	1,189	227	609	71	525	296	155	108	1,886	1,023
94	1,140	327	1,096	228	484	68	535	295	175	115	1,887	1,020
1995	1,202	351	954	208	755	70	521	317	181	116	1,888	1,019
96	761	348	935	204	626	53	627	280	141 ^a	111	1,891	1,017
97 ^b											1,857	1,010
1975-96 Ave.	972	319	686	182	404	52	575	264	173	75	1,748	852
1977-86 Ave.	933	313	492	171	315	44	660	248	174	57	1,718	789
1987-96 Ave.	1,069	355	969	212	563	67	522	300	188	102	1,870	991
% Change in last 10 years. ^c	15%	13%	97%	24%	79%	53%	-21%	21%	8%	80%	9%	26%

¹ Total permits licensed according to the Commercial Fisheries Entry Commission.

^a Effort was 37 drift permits through July 24.

^b Data not yet available.

^c Percent change in 1987-96 average from 1977-86 average (minus figures indicate a decrease).

Table 2. Bristol Bay sockeye salmon catch in percent and numbers by gear type, 1965-97.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	92	8	22,315	1,940	24,255
66	89	11	8,289	1,025	9,314
67	89	11	3,855	476	4,331
68	90	10	2,514	279	2,793
69	88	12	5,827	795	6,622
1970	93	7	19,271	1,450	20,721
71	90	10	8,626	958	9,584
72	93	7	2,247	169	2,416
73	92	8	700	61	761
74	79	21	1,076	286	1,362
1975	91	9	4,458	441	4,899
76	90	10	5,057	562	5,619
77	89	11	4,341	537	4,878
78	88	12	8,737	1,191	9,928
79	88	12	18,858	2,571	21,429
1980	86	14	20,435	3,327	23,762
81	86	14	22,019	3,584	25,603
82	87	13	13,318	1,942	15,260
83	90	10	33,448	3,924	37,372
84	90	10	22,219	2,486	24,705
1985	90	10	21,352	2,344	23,696
86	85	15	13,356	2,420	15,776
87	87	13	13,911	2,158	16,069
88	86	14	12,038	1,952	13,990
89	86	14	24,642	4,093	28,735
1990	87	13	29,146	4,377	33,523
91	86	14	22,241	3,580	25,821
92	88	12	27,895	3,985	31,880
93	87	13	35,307	5,156	40,463
94	88	12	31,126	4,098	35,224
1995	87	13	38,620	5,649	44,269
96	86	14	25,510	4,078	29,588
97 ^a	83	17	10,212	2,134	12,346
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20-yr. Ave.	87	13	22,220	3,252	25,472
10-yr. Ave.	86	14	25,674	3,910	29,584
1965-97 Ave.	88	12	16,150	2,243	18,394

^a Preliminary catch figures.

Table 3. Naknek-Kvichak District sockeye salmon catch in percent and numbers by gear type, 1965-97.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	95	5	18,206	964	19,170
66	93	7	5,040	358	5,398
67	90	10	2,115	223	2,338
68	89	11	1,085	132	1,217
69	91	9	4,250	405	4,655
1970	96	4	16,757	724	17,481
71	93	7	5,426	431	5,857
72	96	4	1,062	40	1,102
73	88	12	149	20	169
74	82	18	439	99	538
1975	94	6	2,888	198	3,086
76	93	7	2,363	184	2,547
77	90	10	1,956	211	2,167
78	91	9	4,651	473	5,124
79	90	10	13,548	1,443	14,991
1980	88	12	12,330	1,666	13,996
81	89	11	9,732	1,261	10,993
82	87	13	4,509	659	5,168
83	92	8	19,774	1,785	21,559
84	90	10	13,102	1,444	14,546
1985	87	13	7,154	1,025	8,179
86	70	30	2,014	878	2,892
87	86	14	4,272	714	4,986
88	86	14	3,011	470	3,481
89	89	11	12,265	1,545	13,810
1990	88	12	15,189	2,083	17,272
91	89	11	9,322	1,154	10,476
92	89	11	8,366	1,030	9,396
93	84	16	7,461	1,447	8,908
94	89	11	14,529	1,799	16,328
1995	89	11	17,974	2,306	20,280
96	83	17	6,801	1,411	8,212
97 ^a	73	27	444	164	608
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20-yr. Ave.	86	14	9,322	1,238	10,560
10-yr. Ave.	86	14	9,536	1,341	10,877
1965-97 Ave.	88	12	7,521	871	8,392

^a Catches are preliminary.

Table 4. Egegik District sockeye salmon catch in percent and numbers by gear type, 1965-97.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	83	17	2,655	525	3,180
66	88	12	1,849	252	2,101
67	90	10	959	112	1,071
68	93	7	627	44	671
69	80	20	713	176	889
1970	85	15	1,196	208	1,404
71	87	13	1,137	170	1,307
72	91	9	761	79	840
73	90	10	199	22	221
74	78	22	134	38	172
1975	90	10	867	97	964
76	91	9	1,204	126	1,330
77	88	12	1,564	217	1,781
78	84	16	1,009	199	1,208
79	78	22	1,756	501	2,257
1980	71	29	1,875	748	2,623
81	77	23	3,349	1,012	4,361
82	83	17	2,023	425	2,448
83	86	14	5,805	953	6,758
84	92	8	4,752	435	5,187
1985	93	7	6,999	539	7,538
86	89	11	4,336	516	4,852
87	91	9	4,859	498	5,357
88	90	10	5,841	616	6,457
89	90	10	7,968	934	8,902
1990	91	9	9,486	886	10,372
91	91	9	6,164	633	6,797
92	91	9	14,270	1,376	15,646
93	93	7	20,037	1,563	21,600
94	92	8	9,920	830	10,750
1995	90	10	13,030	1,396	14,426
96	90	10	9,722	1,087	10,809
97 ^a	87	13	6,584	984	7,568
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20-yr. Ave.	87	13	6,989	807	7,796
10-yr. Ave.	91	9	10,302	1,031	11,333
1965-97 Ave.	87	13	4,656	551	5,207

^a Catches are preliminary.

Table 5. Ugashik District sockeye salmon catch in percent and numbers by gear type, 1965-97.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	82	18	760	166	926
66	83	17	370	75	445
67	81	19	133	31	164
68	80	20	66	16	82
69	84	16	142	28	170
1970	77	23	132	40	172
71	89	11	848	106	954
72	28	72	5	13	18
73	75	25	3	1	4
74	50	50	1	1	2
1975	80	20	12	3	15
76	90	10	158	17	175
77	90	10	84	9	93
78	88	13	7	1	8
79	84	16	328	62	390
1980	88	12	778	108	886
81	89	11	1,884	232	2,116
82	87	13	988	151	1,139
83	93	7	3,116	233	3,349
84	92	8	2,456	202	2,658
1985	96	4	6,212	251	6,463
86	95	5	4,765	238	5,003
87	94	6	2,001	128	2,129
88	91	9	1,383	140	1,523
89	87	13	2,752	394	3,146
1990	91	9	1,960	189	2,149
91	89	11	2,617	328	2,945
92	90	10	2,989	332	3,321
93	90	10	3,764	413	4,177
94	93	7	4,050	303	4,353
1995	95	5	4,288	222	4,510
96	95	5	4,191	220	4,411
97 ^a	90	10	1,267	143	1,410
<hr/>					
20-yr. Ave.	91	9	2590	215	2804
10-yr. Ave.	91	9	2926	268	3195
1965-97 Ave.	85	15	1652	145	1797

^a Catches are preliminary.

Table 6. Nushagak District sockeye salmon catch in percent and numbers by gear type, 1965-97.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	72	28	693	263	956
66	72	28	840	331	1,171
67	86	14	569	89	658
68	90	10	674	75	749
69	81	19	607	142	749
1970	67	33	791	397	1,188
71	77	23	969	288	1,257
72	92	8	352	30	382
73	93	7	252	20	272
74	73	27	371	139	510
1975	80	20	518	128	646
76	85	15	1,071	195	1,266
77	86	14	529	90	619
78	85	15	2,666	471	3,137
79	82	18	2,713	614	3,327
1980	85	15	3,802	696	4,498
81	81	19	6,100	1,393	7,493
82	90	10	5,299	611	5,910
83	84	16	4,287	833	5,120
84	83	17	1,660	332	1,992
1985	64	36	830	477	1,307
86	75	25	2,032	687	2,719
87	78	22	2,551	703	3,254
88	75	25	1,274	433	1,707
89	58	42	1,609	1,179	2,788
1990	67	33	2,384	1,149	3,533
91	76	24	3,816	1,238	5,054
92	65	35	1,820	970	2,790
93	72	28	3,755	1,482	5,237
94	71	29	2,418	975	3,393
1995	68	32	3,009	1,437	4,446
96	81	19	4,589	1,105	5,694
97 ^a	71	29	1,867	751	2,618
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20-yr. Ave.	75	25	2,924	877	3,801
10-yr. Ave.	70	30	2,654	1,072	3,726
1965-97 Ave.	78	22	2,022	598	2,619

^a Catches are preliminary.

Table 7. Togiak District sockeye salmon catch in percent and numbers by gear type, 1965-97.

Year	Percentage Catch by gear type		Catch in Numbers by gear type (1,000's)		Total Catch (1,000's)
	Drift	Set	Drift	Set	
1965	100	0	261	0	261
66	98	3	195	5	200
67	95	5	95	5	100
68	99	1	72	1	73
69	99	1	133	2	135
1970	99	1	153	1	154
71	100	0	208	1	209
72	100	0	75	0	75
73	99	1	95	1	96
74	91	9	127	12	139
1975	92	8	174	15	189
76	92	8	277	25	302
77	89	11	196	23	219
78	84	16	378	74	452
79	82	18	376	85	461
1980	83	17	528	107	635
81	79	21	503	136	639
82	84	16	500	96	596
83	80	20	468	120	588
84	77	23	249	73	322
1985	75	25	157	52	209
86	68	32	210	99	309
87	66	34	228	115	343
88	64	36	529	293	822
89	55	45	49	40	89
1990	64	36	126	71	197
91	59	41	322	227	549
92	62	38	450	276	726
93	54	46	290	250	540
94	52	48	209	191	400
1995	52	48	317	288	605
96	45	55	207	255	462
97 ^a	35	65	50	92	142
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20-yr. Ave.	66	34	307	147	454
10-yr. Ave.	54	46	255	198	453
1965-97 Ave.	78	22	249	92	341

^a Catches are preliminary.

Table 8. Bristol Bay average catch in numbers of sockeye by gear type, 1965-97.

Year	Estimated Permits Actually Fished		Average Seasonal Catch of Sockeye (No. of Fish) by Permit Type		Drift Gillnet % of Total Catch	Set Gillnet % of Total Catch
	Drift	Set	Drift	Set		
1965	1,395	582	15,996	3,333	92	8
66	1,715	549	4,833	1,867	89	11
67	1,555	439	2,479	1,084	89	11
68	1,237	493	2,032	566	90	10
69	1,633	511	3,568	1,556	88	12
1970	1,674	623	11,512	2,327	93	7
71	1,710	421	5,044	2,276	90	10
72	1,467	490	1,532	345	93	7
73	953	542	735	113	92	8
74	659	214	1,633	1,336	79	21
1975	1,235	445	3,610	991	91	9
76	1,353	501	3,738	1,122	90	10
77	1,355	495	3,204	1,085	89	11
78	1,569	650	5,569	1,832	88	12
79	1,711	768	11,022	3,348	88	12
1980	1,762	804	11,598	4,138	86	14
81	1,783	841	12,349	4,262	86	14
82	1,791	859	7,436	2,261	87	13
83	1,797	861	18,613	4,557	90	10
84	1,798	866	12,358	2,871	90	10
1985	1,813	872	11,777	2,688	90	10
86	1,800	872	7,420	2,775	85	15
87	1,799	872	7,733	2,475	87	13
88	1,839	922	6,546	2,117	86	14
89	1,860	973	13,248	4,207	86	14
1990	1,880	982	15,503	4,457	87	13
91	1,881	963	11,824	3,717	86	14
92	1,884	971	14,806	4,104	88	13
93	1,881	971	18,770	5,309	87	13
94	1,884	946	16,521	4,332	88	12
1995	1,888	992	20,073	5,695	87	13
96	1,891	943	13,490	4,324	86	14
97 ^a						
20-yr. Ave.	1,793	871	11,993	3,528	87	13
10-yr. Ave.	1,869	954	13,851	4,074	87	13
1965-96 Ave.	1,639	726	9,268	2,733	88	12

^a Data not yet available.

Table 9. Average catch in numbers of sockeye by gear type and district, 1978-96.^a

Average Catch in Numbers of Sockeye Salmon (Per Permit)										
Year	Naknek-Kvichak		Egegik		Ugashik		Nushagak		Togiak	
	Drift	Set	Drift	Set	Drift	Set	Drift	Set	Drift	Set
1977	3,150	1,179	4,827	2,309	1,787	1,286	1,111	542	1,508	742
78	5,828	1,689	2,614	1,531	146	250	4,159	2,181	2,503	1,947
79	12,781	4,842	5,289	3,151	3,184	2,696	4,136	2,602	2,321	1,491
1980 ^b	12,196	4,801	5,936	4,179	3,791	3,724	5,709	2,888	2,917	2,277
81	9,801	3,624	9,707	6,060	6,978	7,030	9,271	5,358	2,826	2,519
82	5,629	1,985	4,817	2,530	3,905	3,082	5,407	2,425	2,475	1,714
83	18,585	4,945	12,014	5,573	9,006	4,957	5,413	3,204	1,865	2,069
84	12,009	4,272	8,293	2,417	7,847	3,811	2,887	1,277	1,107	1,159
1985	6,141	2,920	7,478	2,978	8,395	4,254	2,044	1,900	1,342	963
86	2,789	2,946	5,205	1,849	5,646	1,750	2,709	2,021	1,489	900
87	4,023	2,245	5,230	2,417	3,161	1,641	4,075	2,475	1,562	1,716
88	2,967	1,328	5,783	3,192	2,393	2,000	2,386	1,535	1,648	2,382
89	10,111	4,256	8,081	4,385	4,959	5,794	4,291	4,094	329	412
1990	10,935	4,756	9,779	4,102	4,612	2,908	4,987	3,283	984	1,092
91	8,544	3,188	9,173	2,944	5,803	5,125	8,171	3,968	1,556	2,142
92	8,545	2,943	15,005	6,712	5,770	4,955	3,454	3,233	1,619	2,379
93	8,935	4,319	16,852	6,885	6,181	5,817	7,152	5,007	1,871	2,315
94	12,745	5,500	9,051	3,640	8,367	4,460	4,519	3,306	1,197	1,657
1995	14,953	6,569	13,659	6,710	5,679	3,165	5,775	4,534	1,751	2,487
96	8,937	4,055	10,398	5,330	6,695	4,144	7,318	3,844	1,471	2,299 ^c
20-yr. Ave.	8,980	3,618	8,460	3,945	5,215	3,642	4,749	2,984	1,717	1,733
1977-86 Ave.	8,891	3,320	6,618	3,258	5,068	3,284	4,285	2,440	2,035	1,578
1987-96 Ave.	9,070	3,916	10,301	4,632	5,362	4,001	5,213	3,528	1,399	1,888
% Change in last 10 years. ^d	2%	18%	56%	42%	6%	22%	22%	45%	-31%	20%

^a Averages computed using total effort (see Table 1).

^b General district catches not included.

^c 37 Drifters exclusively through July 24 averaged 4,208 sockeye per permit.

^d Percent change in 1987-96 average from 1977-86 average (minus figures indicate a decrease).

Table 10. Nushagak District sockeye catch by gear type, in numbers of fish and percent of total catch, 1977-1996.

Year	Set Net						Drift Net		Total
	Igushik Section		Nushagak Section		Combined Sections				
1977	14,512	2%	75,088	12%	89,600	14%	529,425	86%	619,025
78	83,414	3%	387,730	12%	471,144	15%	2,666,022	85%	3,137,166
79	106,010	3%	508,219	15%	614,229	18%	2,712,883	82%	3,327,112
1980	113,149	3%	582,873	13%	696,022	15%	3,801,765	85%	4,497,787
81	236,129	3%	1,157,209	15%	1,393,338	19%	6,099,755	81%	7,493,093
82	131,468	2%	479,496	8%	610,964	10%	5,298,763	90%	5,909,727
83	145,225	3%	687,885	13%	833,110	16%	4,286,634	84%	5,119,744
84	46,485	2%	285,712	14%	332,197	17%	1,660,484	83%	1,992,681
1985	99,944	8%	377,108	29%	477,052	36%	830,209	64%	1,307,261
86	154,013	6%	533,479	20%	687,492	25%	2,031,821	75%	2,719,313
87	138,889	4%	564,346	17%	703,235	22%	2,551,485	78%	3,254,720
88	56,557	3%	376,479	22%	433,036	25%	1,273,680	75%	1,706,716
89	238,887	9%	940,396	34%	1,179,283	42%	1,608,911	58%	2,788,194
1990	312,455	9%	836,091	24%	1,148,546	33%	2,383,997	67%	3,532,543
91	399,745	8%	837,990	17%	1,237,735	24%	3,816,110	76%	5,053,845
92	130,827	5%	839,067	30%	969,894	35%	1,819,947	65%	2,789,841
93	308,822	6%	1,173,070	22%	1,481,892	28%	3,754,665	72%	5,236,557
94	242,273	7%	732,943	22%	975,216	29%	2,417,927	71%	3,393,143
1995	492,937	11%	944,230	21%	1,437,167	32%	3,008,733	68%	4,445,900
96 ^a	258,903	5%	846,071	15%	1,104,974	19%	4,588,549	81%	5,693,523
20-yr. Ave.	185,532	5%	658,274	18%	843,806	23%	2,857,088	77%	3,700,895
10-yr. Ave.	258,030	7%	809,068	21%	1,067,098	28%	2,722,400	72%	3,789,498
1977-86 Ave.	115,385	3%	512,650	14%	628,035	18%	2,951,750	82%	3,579,784

^a Nushagak Section catches include Wood River Special Harvest Area catches.

Table 11. Naknek-Kvichak District sockeye catch by gear type, in numbers of fish and percent of total catch, 1985-1996.

Year	Set Net						Drift Net		Total
	Naknek Section		Kvichak Section		Combined Sections				
1985	556,969	7%	84,078	1%	641,047	8%	7,144,809	92%	7,785,856
86	557,705	36%	19,992	1%	577,697	37%	971,066	63%	1,548,763
87	312,400	6%	296,197	6%	608,597	12%	4,272,334	88%	4,880,931
88	214,059	6%	255,936	7%	469,995	14%	3,010,841	86%	3,480,836
89	663,558	5%	881,849	6%	1,545,407	11%	12,264,549	89%	13,809,956
1990	1,045,752	6%	1,034,462	6%	2,080,214	12%	15,189,248	88%	17,269,462
91	655,722	6%	496,732	5%	1,152,454	11%	9,321,417	89%	10,473,871
92	779,371	8%	262,147	3%	1,041,518	11%	8,441,331	89%	9,482,849
93	825,331	9%	569,432	6%	1,394,763	16%	7,513,113	84%	8,907,876
94	556,696	3%	1,261,049	8%	1,817,745	11%	14,529,192	89%	16,346,937
1995	992,429	5%	1,313,263	6%	2,305,692	11%	17,973,847	89%	20,279,539
96	824,221	10%	249,069	3%	1,073,290	14%	6,800,835	86%	7,874,125
12-yr. Ave.	665,351	7%	560,351	6%	1,225,702	12%	8,952,715	88%	10,178,417

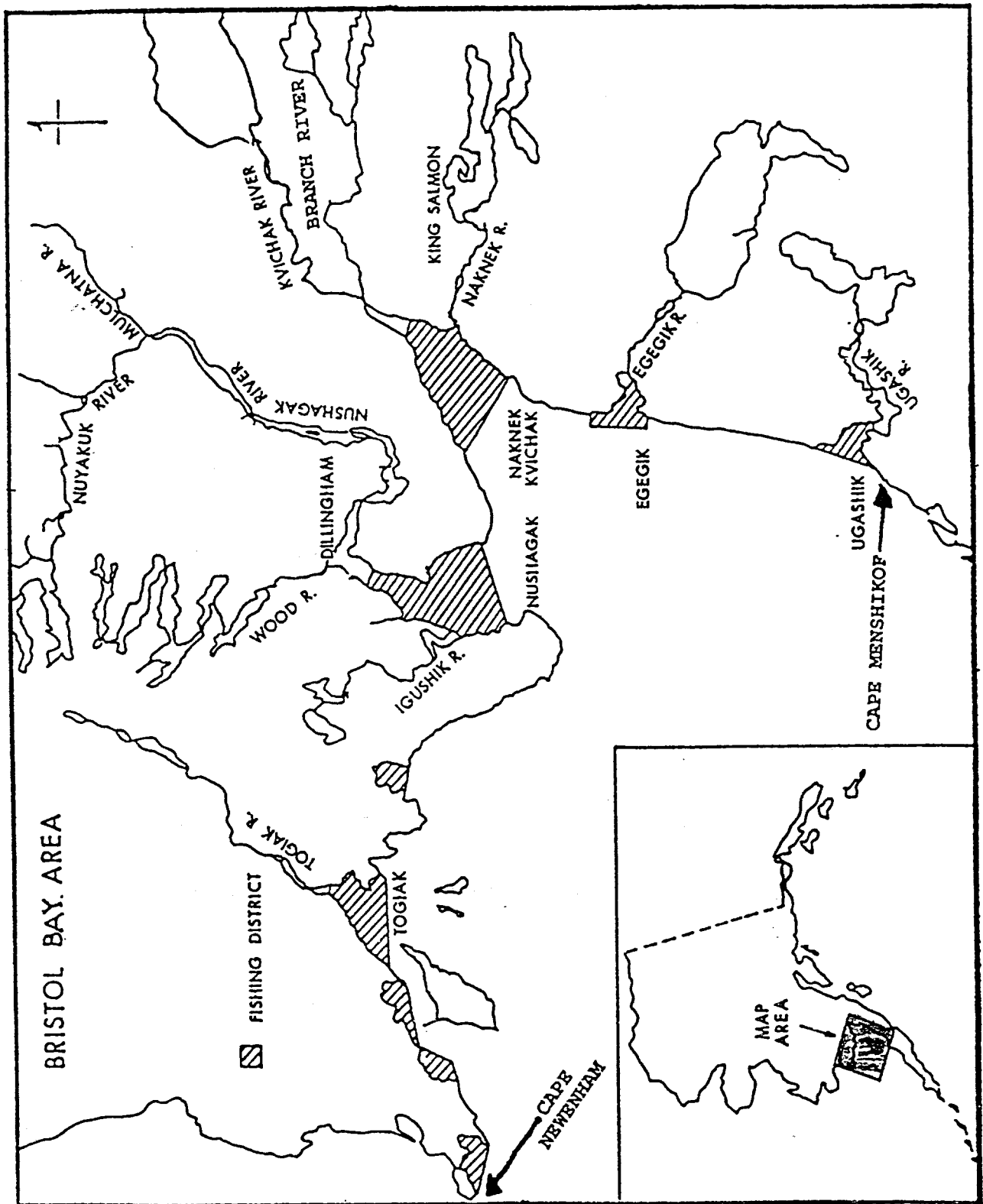


Figure 1. Bristol Bay commercial salmon fishing districts.

NAKNEK-KVICHAK DISTRICT EFFORT BY GEAR TYPE 1975-1996

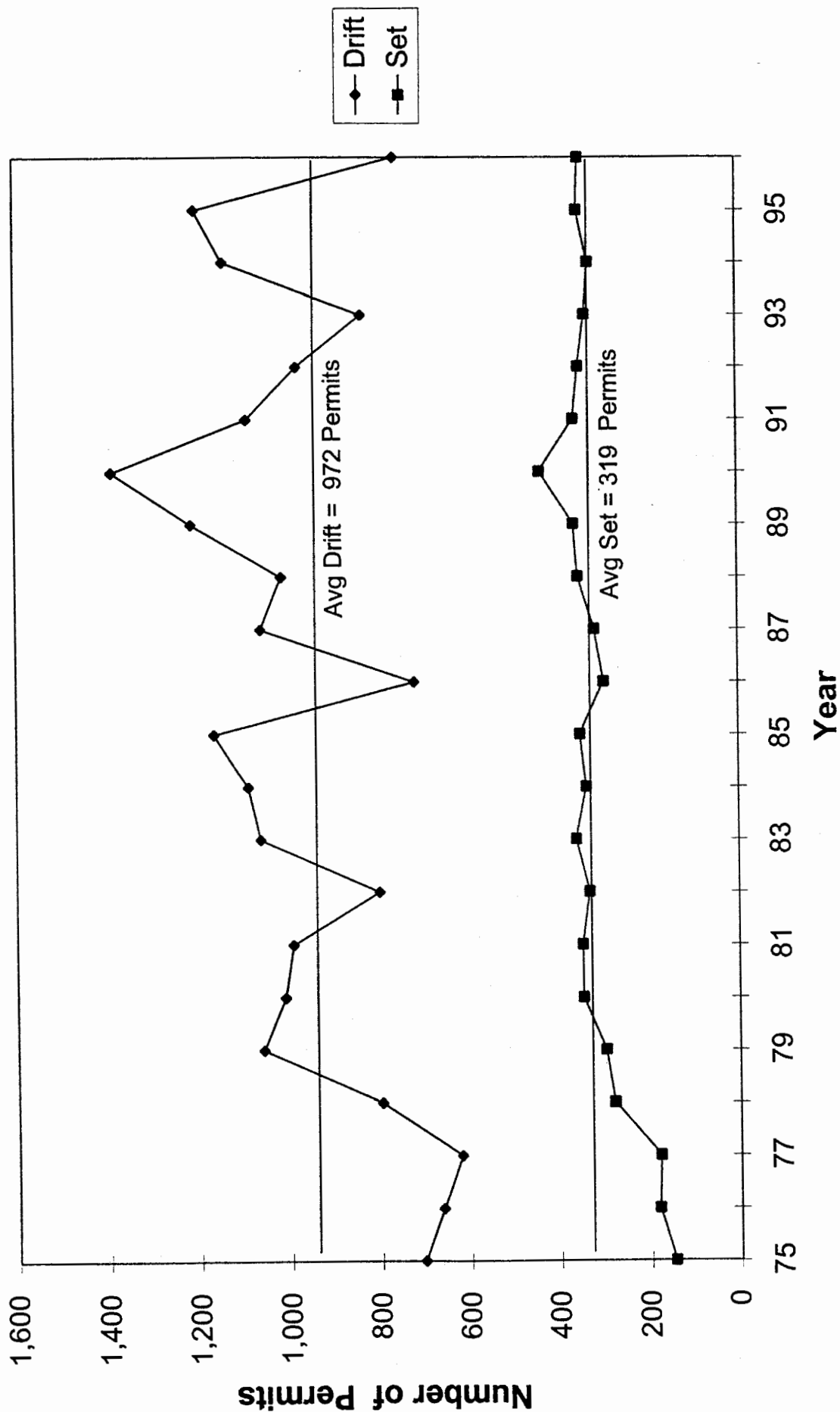


Figure 2.

EGEGIK DISTRICT EFFORT BY GEAR TYPE 1975-1996

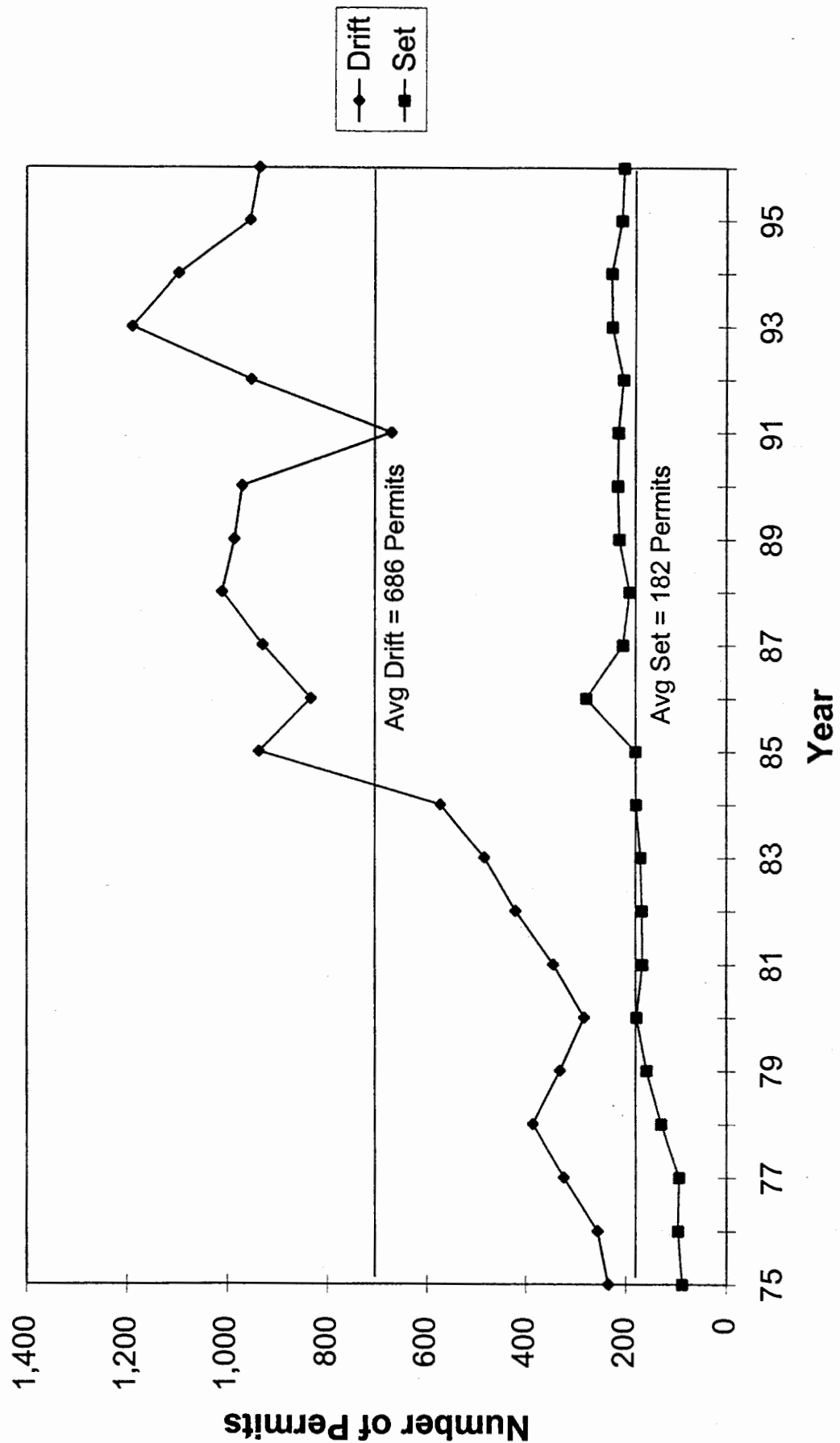


Figure 3.

UGASHIK DISTRICT EFFORT BY GEAR TYPE 1975-1996

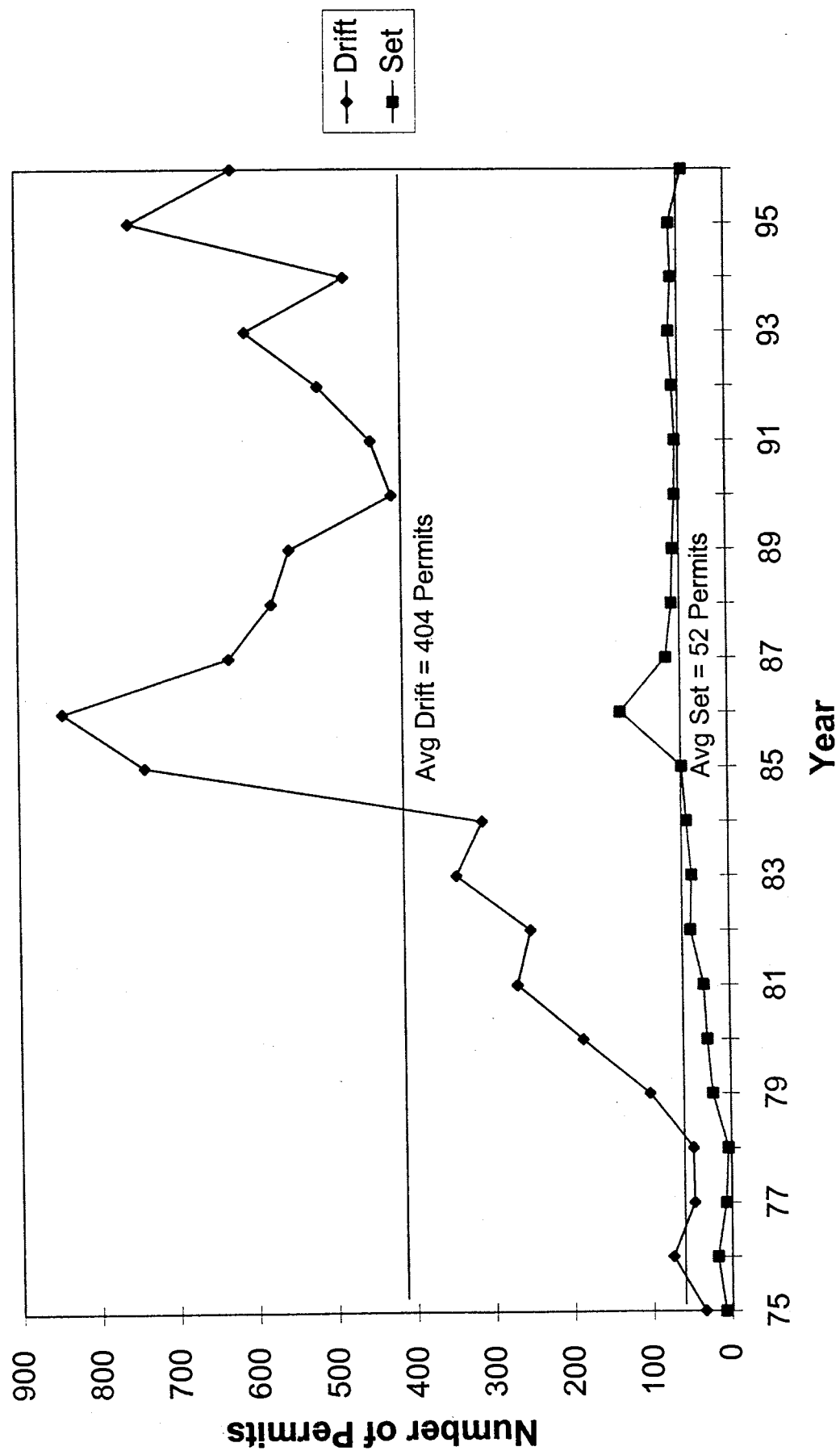


Figure 4.

NUSHAGAK DISTRICT EFFORT BY GEAR TYPE 1975-1996

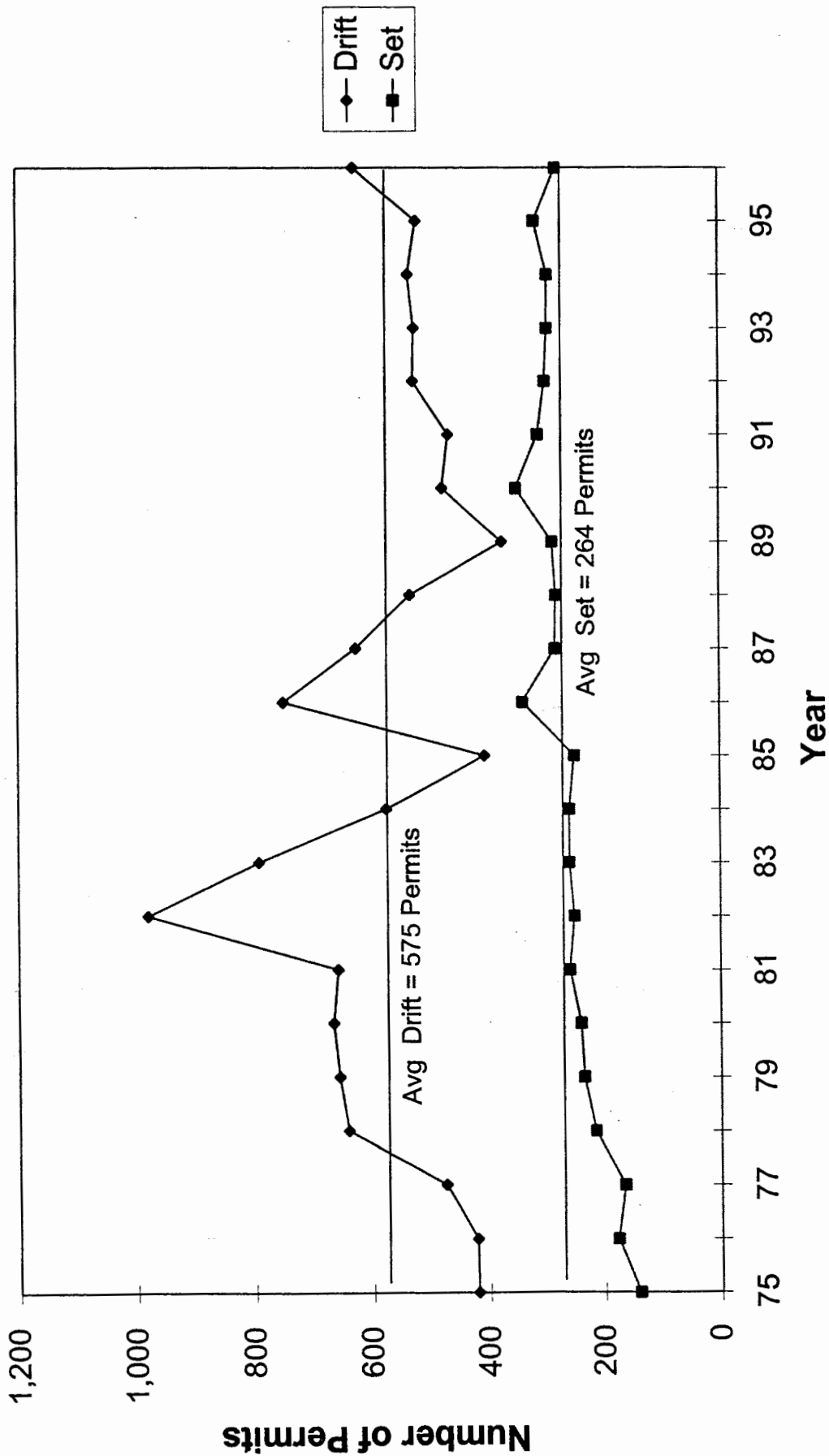


Figure 5.

TOGIAK DISTRICT EFFORT BY GEAR TYPE 1975-1996

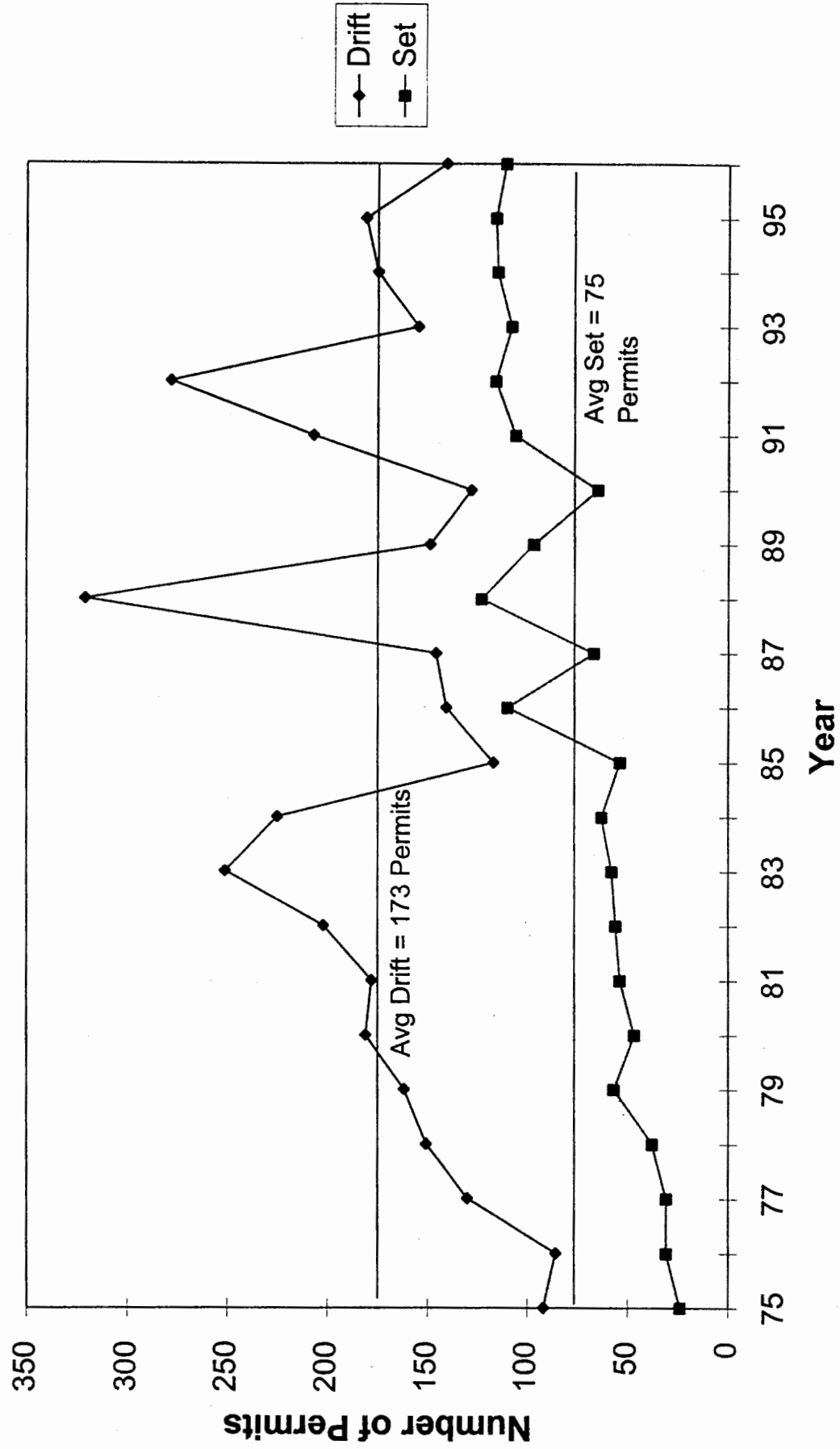


Figure 6.

NAKNEK-KVICHAK DISTRICT CATCH BY GEAR TYPE 1978-1997

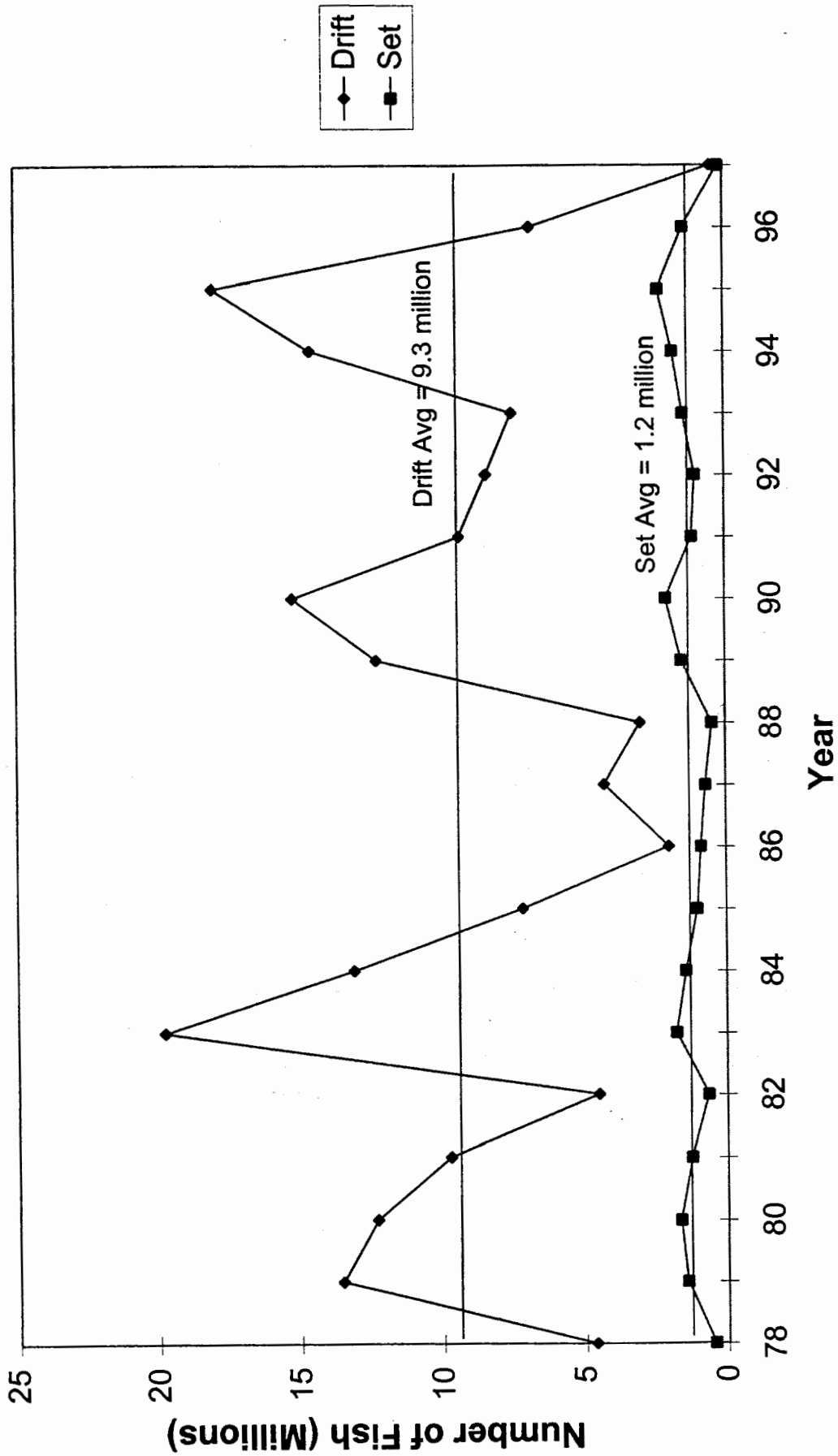


Figure 7.

EGEGIK DISTRICT CATCH BY GEAR TYPE 1978-1997

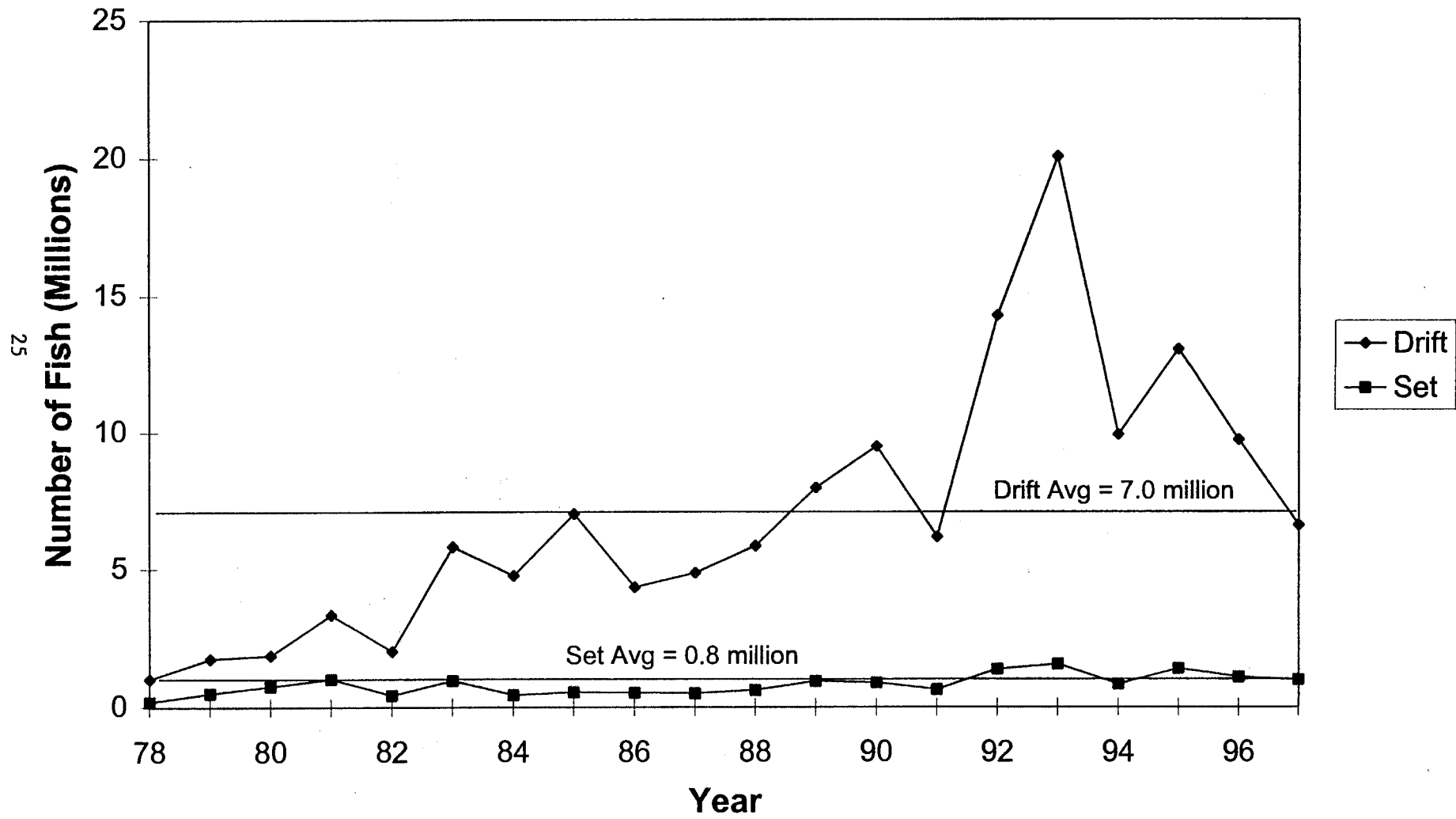


Figure 8.

UGASHIK DISTRICT CATCH BY GEAR TYPE 1978-1997

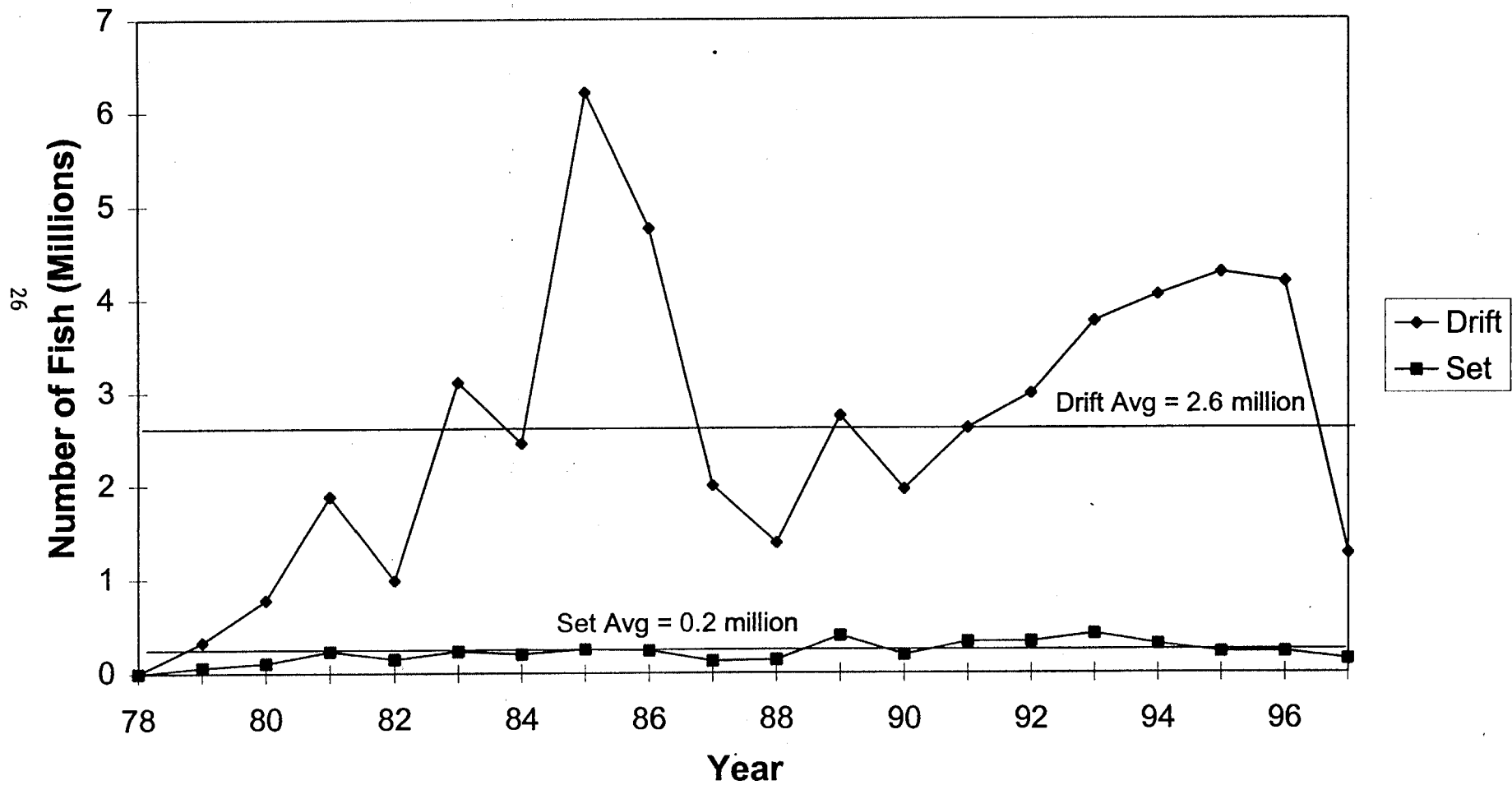


Figure 9.

NUSHAGAK DISTRICT CATCH BY GEAR TYPE 1978-1997

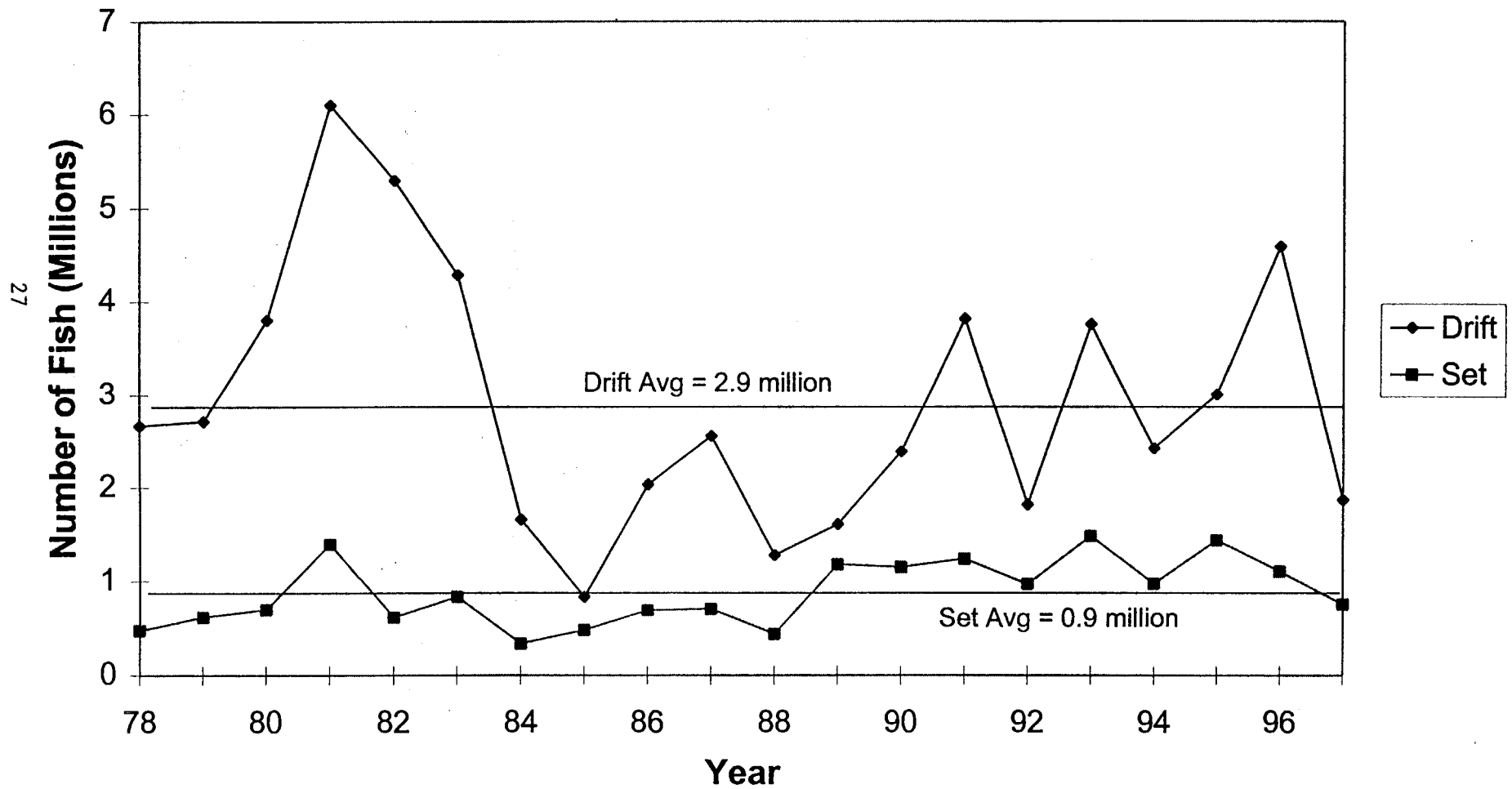


Figure 10.

TOGIAK DISTRICT CATCH BY GEAR 1978-1997

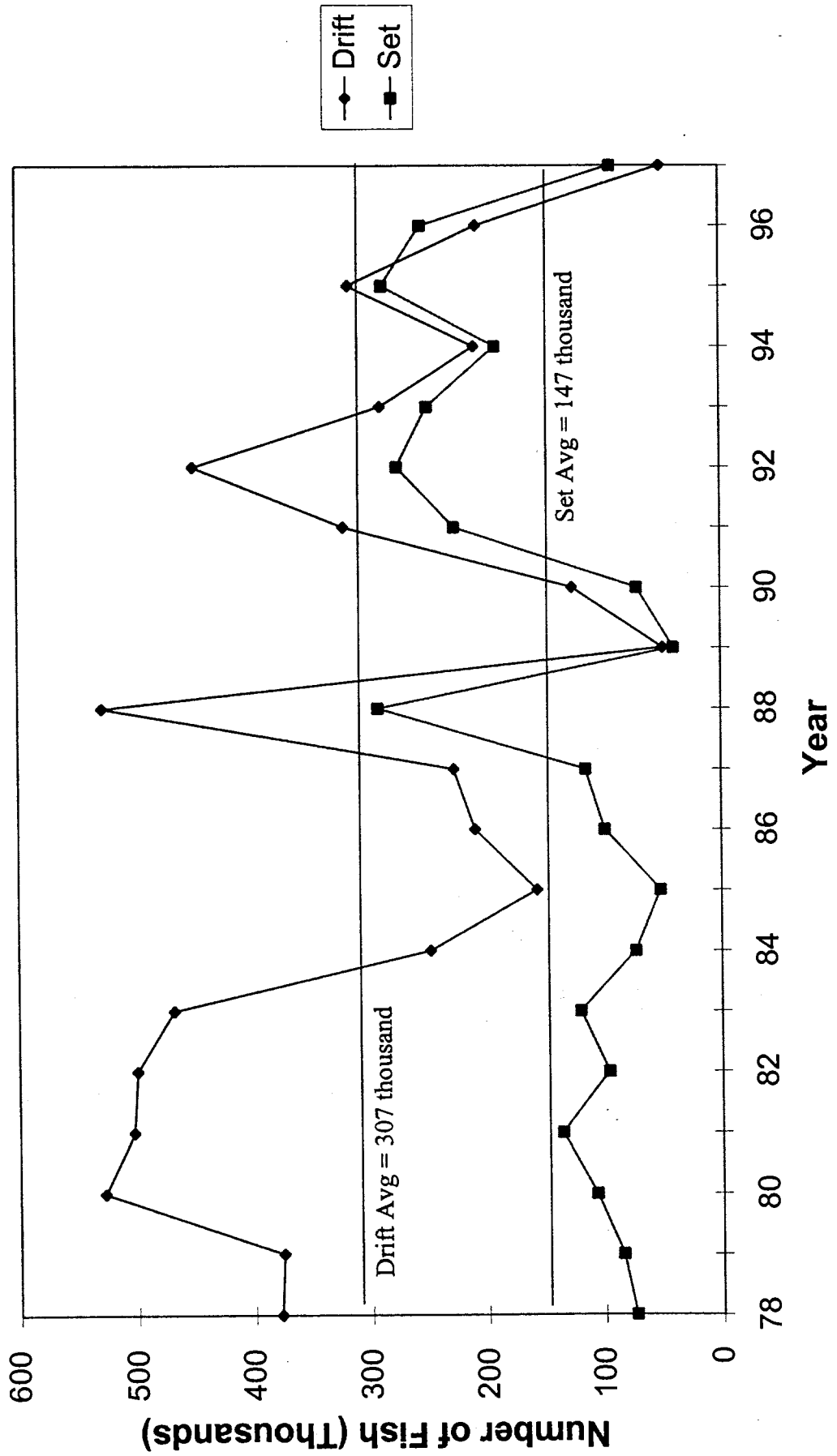


Figure 11.

NUSHAGAK DISTRICT SET GILLNET CATCH BY SECTION **1977-1996**

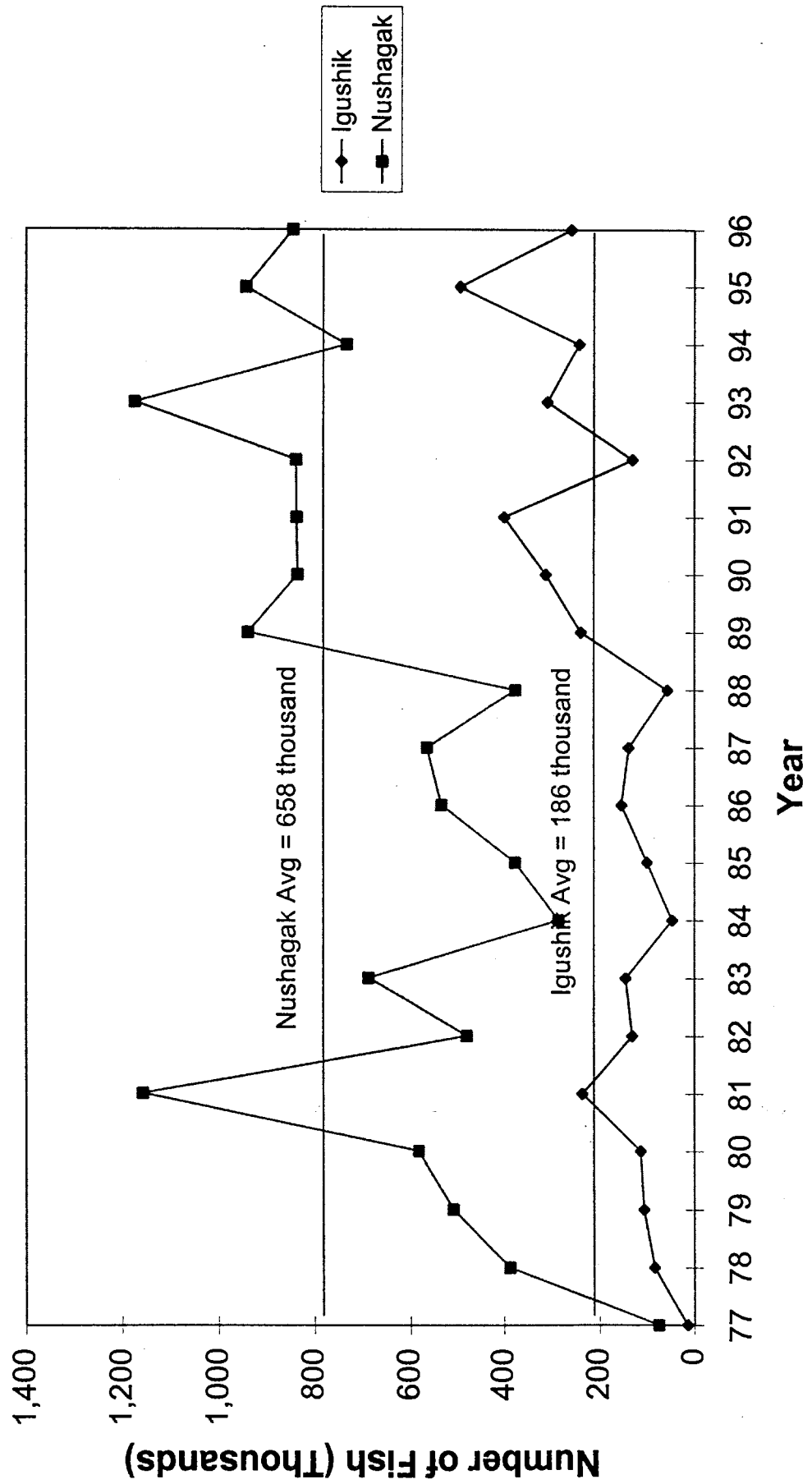


Figure 12.

NAK-KVI DISTRICT SET GILLNET CATCH BY SECTION 1985-1996

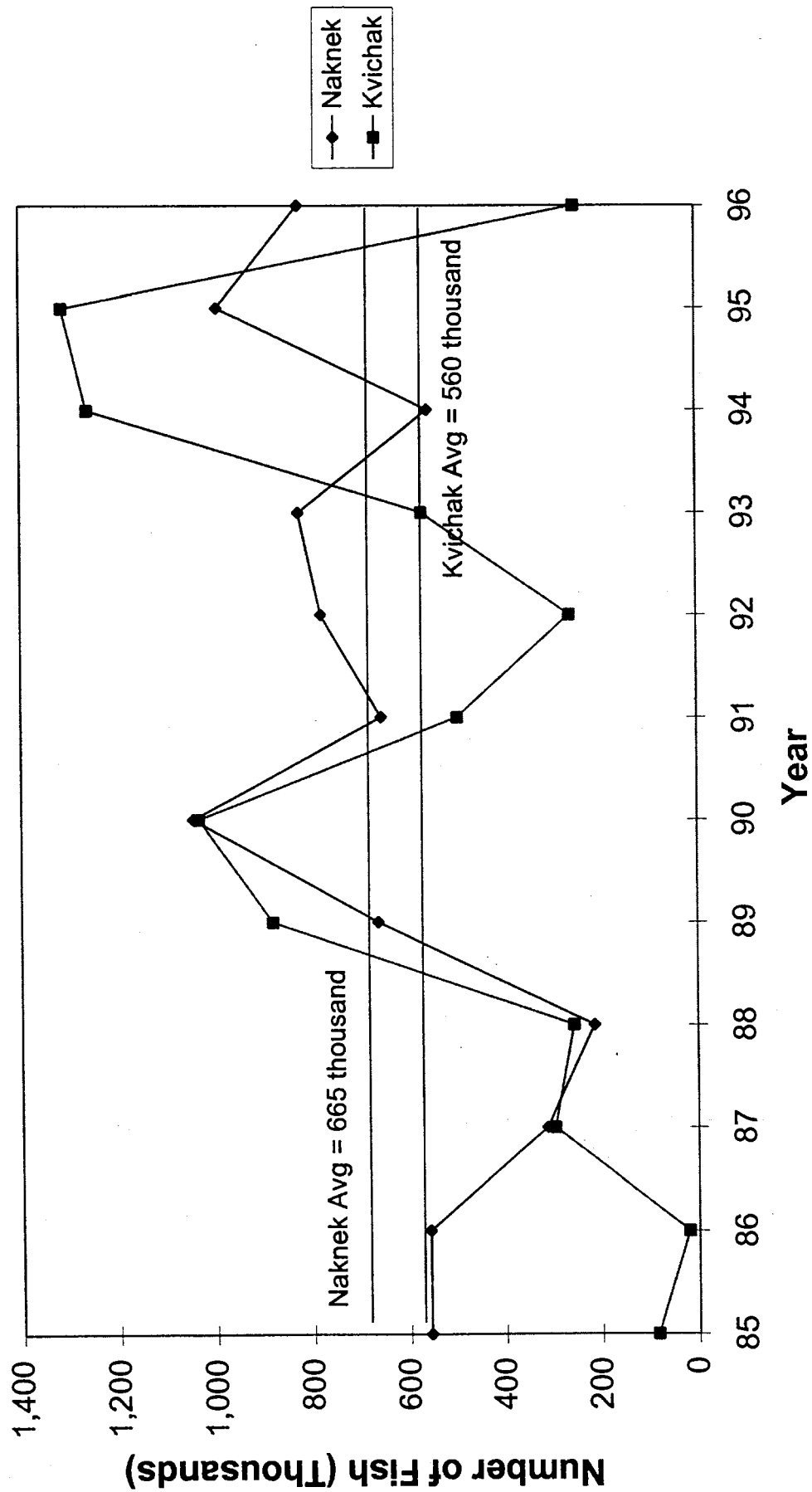
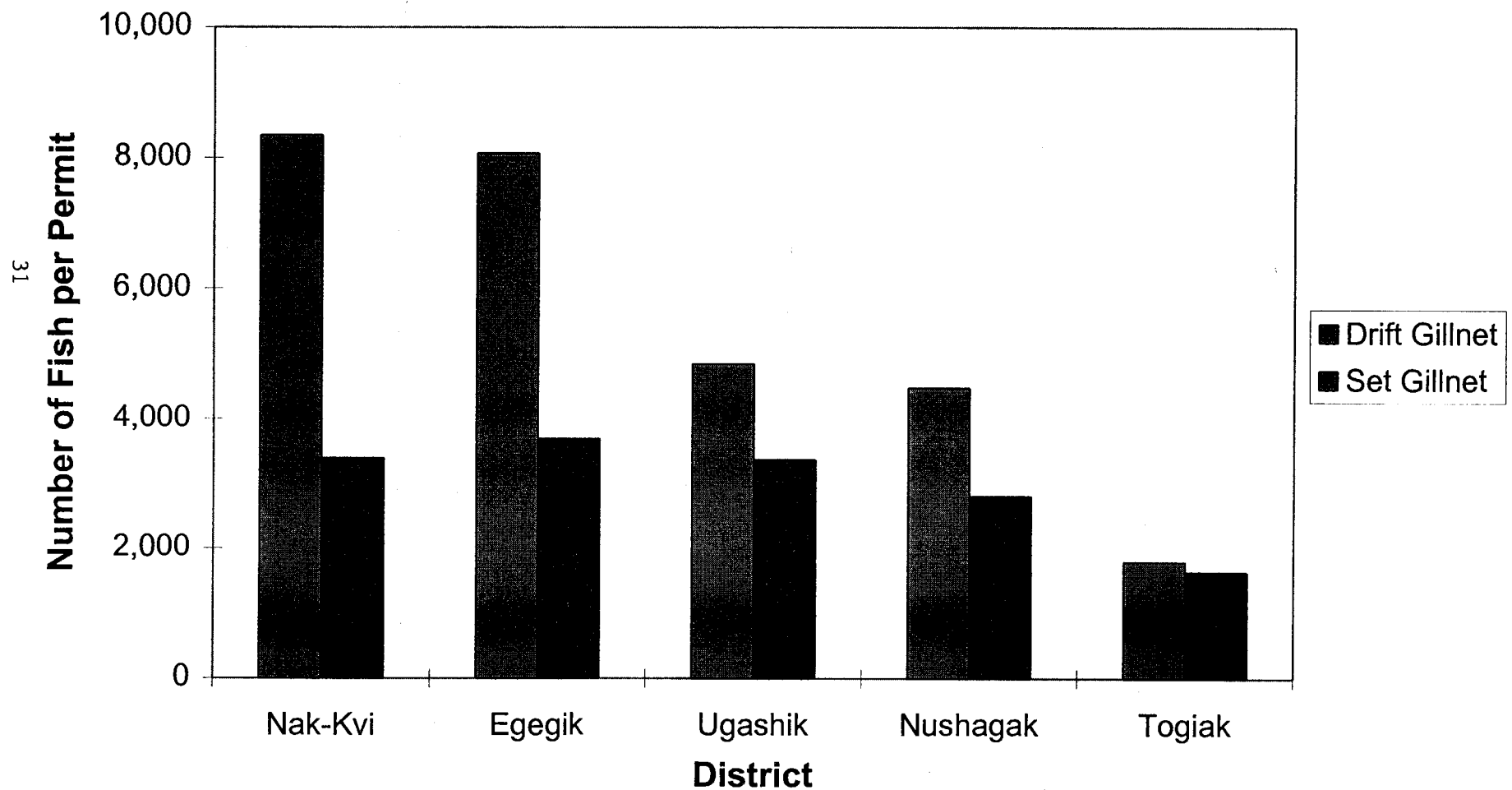
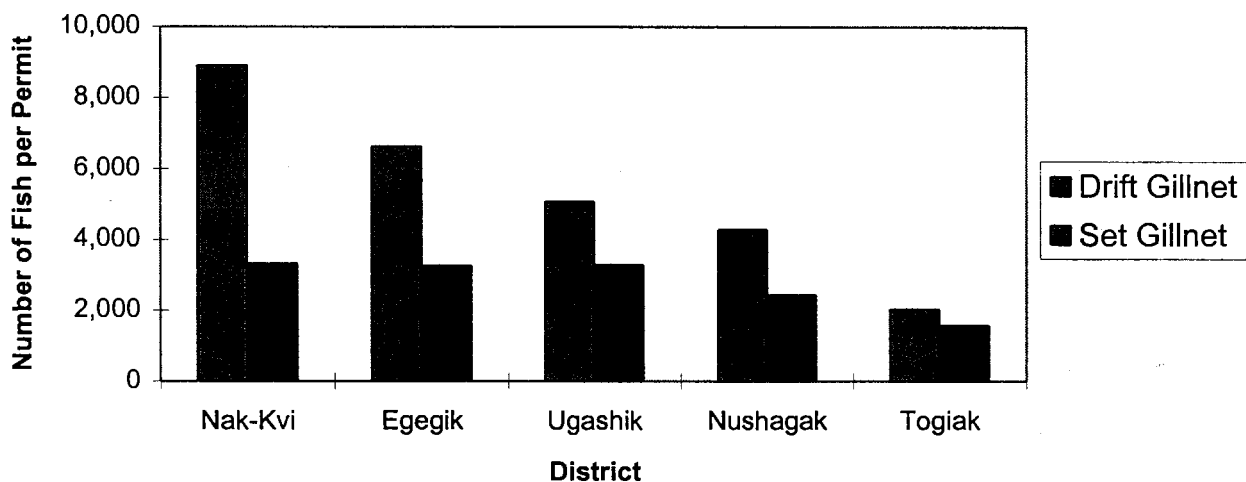


Figure 13.

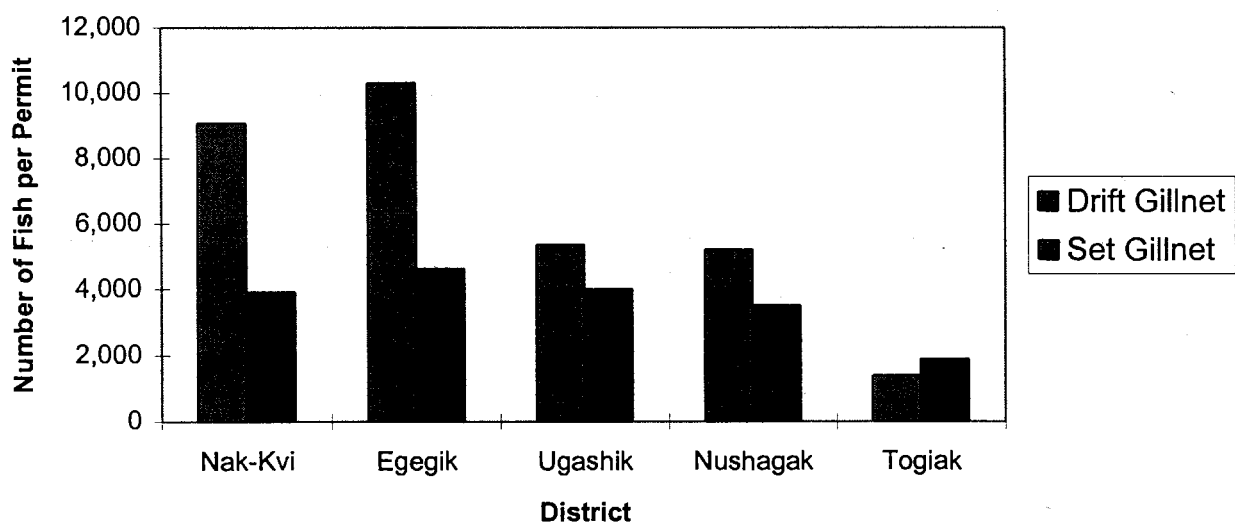
BRISTOL BAY AVERAGE SOCKEYE CATCH BY DISTRICT & GEAR TYPE 1975-1996



BRISTOL BAY AVERAGE SOCKEYE CATCH BY DISTRICT & GEAR TYPE 1977-1986



BRISTOL BAY AVERAGE SOCKEYE CATCH BY DISTRICT & GEAR TYPE 1987-1996



Appendix Table 1. Bristol Bay interim-use and permanent entry permits, and permits actually fished, 1978-97.

Year	Number of Permits Issued			Number of Permits Fished	
	Interim Use	Permanent	Total	Number	Percent
DRIFT GILL NET:					
1978	77	1,700	1,777	1,569	88
79	83	1,717	1,800	1,711	95
80	110	1,717	1,827	1,762	96
81	107	1,720	1,827	1,783	98
82	100	1,724	1,824	1,791	98
1983	95	1,726	1,821	1,797	99
84	89	1,729	1,818	1,798	99
85	96	1,738	1,834	1,813	99
86	95	1,743	1,838	1,800	98
87	93	1,745	1,838	1,799	98
1988	90	1,749	1,839	1,839	100
89	91	1,770	1,861	1,860	100
90	93	1,787	1,880	1,880	100
91	88	1,793	1,881	1,881	100
92	87	1,797	1,884	1,884	100
1993	81	1,805	1,886	1,881	100
94	77	1,810	1,887	1,865	99
95	75	1,813	1,888	1,882	100
96	70	1,821	1,891	1,884	100
97	68	1,830	1,898	^a	^a
Average	88	1,762	1,850	1,815	98
SET GILL NET:					
1978	19	891	910	650	71
79	24	910	934	768	82
80	34	913	947	804	85
81	42	914	956	841	88
82	41	916	957	859	90
1983	36	924	960	861	90
84	31	931	962	866	90
85	28	922	950	872	92
86	22	928	950	872	92
87	18	943	950	872	92
1988	17	932	949	922	97
89	18	989	1,007	973	97
90	15	1,001	1,016	982	97
91	12	1,013	1,025	963	94
92	8	1,017	1,025	971	95
1993	8	1,016	1,024	971	95
94	7	1,013	1,020	939	92
95	8	1,011	1,019	967	95
96	6	1,011	1,017	941	93
97	7	1,011	1,018	^a	^a
Average	20	960	980	889	91

^a Data not yet available.